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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,591	09/21/2006	Toshihiko Zenpo	04632.0075	2768

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FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER  
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EXAMINER

MALEKZADEH, SEYED MASOUD

ART UNIT	PAPER NUMBER
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1722

MAIL DATE	DELIVERY MODE
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09/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/593,591	<b>Applicant(s)</b> ZENPO ET AL.	
	<b>Examiner</b> SEYED MALEKZADEH	<b>Art Unit</b> 1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 21 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/26/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

DETAILED ACTION

*Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

*Specification*

The abstract of the disclosure is objected to because abstract contains more than 150 words. Correction is required. See MPEP § 608.01(b).

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11 are rejected under 35 U.S.C. 102 (b) as being anticipated by Koichi ET al (JP 56004342)

As to claims 1 and 4, Koichi et al ('342) discloses an apparatus for molding a mold (32, 33) by pressurizing a mold

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mixture which is composed of sand particles, glue as a binder and water in order to inject mold mixture into a cavity (34) of a heated metal mold (32, 33). The apparatus include a hollow rectangular body (16) having a bottom plate wherein the bottom plate have an injection hole (29) to inject the mold mixture. Further, Koichi et al ('342) disclose mold mixture injects into the metal mold (34) by a pressurized air received from tank (26). Also, Koichi et al ('342) disclose means for opening and closing injection hole (16) to inject the mold mixture into the cavity (34). (See line 13, lower right column, page 1 to line 2, lower left column, page 2 and figures 1-4)

Further, as to claims 2-3 and 10, Koichi et al ('342) further teaches device for measuring moisture, temperature, and viscosity of the mold mixture wherein the device are provided outside of the mold mixture container (19).

Furthermore, Koichi et al ('342), as to claim 5, disclose device to measure the temperature of the mold mixture wherein sensor (25) is attached to container (19). (See line 13, lower right column, page 1 to line 2, lower left column, page 2 and figures 1-4)

Also, as to claims 6-8, Koichi et al ('342), discloses a sensor is provided at the opening of container (19) to

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continuously measure viscosity of the mold mixture when the foam mixture is pressurized.

Further, as to claim 9, Koichi et al ('342), disclose measuring the moisture of mold mixture by a sensor wherein sensor measures a weight loss of the foam mixture when the moisture is evaporated by heating of the mold mixture. (See line 13, lower right column, page 1 to line 2, lower left column, page 2)

Further, as to claim 11, Koichi et al ('342) teaches the metal mold (32, 33) include a passage (31) for passing gases from the cavity (34) of the metal mold to the outside. (See figure 4)

The prior art, thus meet all the claim limitations, and therefore Koichi et al ('342) anticipate claims 1-11.

Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Makiguchi (JP 2000-190049)

As to claims 1 and 4, Makiguchi ('049) discloses an apparatus for molding a mold by pressurizing a sand mixture which is composed of particles of aggregate such as sand particles, water-soluble polymer compound as binder, and water into a cavity (4) which is made of heated metal molds (2 and 3) by injection.

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Further, Makiguchi ('049) discloses the apparatus include a hollow rectangular body (5) having a bottom plate wherein the bottom plate (11) have an injection hole (10) to inject the sand mixture (S). Also, a container (5) held the source material to mix the sand particles with the water-soluble binders, and the water and then injecting the sand mixture into the metal mold (2, 3) and a rubber plate valve (11) for opening and closing the hole (10) to inject the sand mixture into the cavity (4).

Further, Makiguchi ('049) discloses sand mixture injects into the metal mold cavity (4) by pressure. (See paragraphs [0005] to [0010], figure 1)

As to claims 2, 3, and 10, Makiguchi ('049) also discloses devices for measuring temperature, viscosity, and moisture of the sand mixture.

Makiguchi ('049), as to claim 5, further teaches device to measure a temperature is a contact type sensor and is disposed below the mold (2 and 3). (See paragraph [0009])

Furthermore, as to claim 6, Makiguchi ('049) discloses viscosity of the sand mixture is measured by a sensor wherein sensor measures apparent viscosity by measuring a flow rate of the sand mixture flowing from opening of cylindrical structure (9) when the sand mixture is pressurized. also, as to claim 7, Makiguchi ('049) teaches the device for measuring the viscosity

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is disposed in the conjunction between cylinder (9) and hollow rectangular (5), and as to claim 8, viscosity of the mixture is measured continuously. (See paragraphs [0003] and [0013])

Makiguchi ('049), as to claim 9, further discloses a device for measuring moisture of sand mixture wherein the device is a sensor which record a weight loss of the sand mixture. (See paragraph [0004])

Furthermore, as to claim 11, Makiguchi ('049) teaches the metal mold (2, 3) is used for making a mold by injecting a sand mixture made by mixing the sand particles, two or more type of water-soluble binder, and water, into the metal mold, and the metal mold include means for communicating gases from the cavity of the metal mold to the outside of the mold. (See paragraph [0004] and figure 1)

The prior art, thus meet all the claim limitations, and therefore Makiguchi ('049) anticipates claims 1-11.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

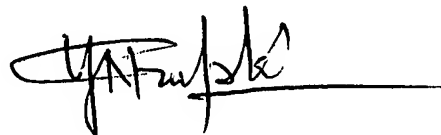
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Masoud Malekzadeh whose telephone number is 571-272-6215. The

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examiner can normally be reached on Monday - Friday at 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on (571) 272-1316. The fax number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance form a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Y. N. Gupta', with a horizontal line extending to the right.

SMM